A Mediation Model of Job Burnout

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Abstract

A comprehensive model of job burnout posits that person-job incongruence within six domains of worklife predicts the level of experienced burnout, which in turn predicts work outcomes. This model was tested against data from two organizational samples: employees of a student services division of a university (N=602) and employees of three health care institutions undergoing a merger (N=2009). The study utilized a new measure of work environments (the Areas of Worklife scale), confirming its factor structure in the two settings. The scale assesses six areas of worklife: workload, control, reward, community, fairness, and values. An EQS analysis confirmed the proposed model in the two samples, revealing that the values area mediated much of the relationship of the other five work areas with employees' psychological states, which in turn mediated their evaluation of organizational change. The implications for workplace assessments and the development of organizational interventions are discussed.

A Mediation Model of Job Burnout

Job stress has been recognized as a significant occupational hazard, which can impair both health and work performance (e.g. Sauter & Murphy, 1995). The worker's internal experience of stress is assumed to play a mediating role between the impact of external job demands (stressors) and work-related outcomes (such as absenteeism or illness). This basic model should be especially true of the stress phenomenon known as job burnout, which involves a prolonged response to chronic interpersonal job conditions (Maslach, 1993). Our research in this area leads us to propose that organizational conditions influence a worker's experience of burnout (or of its positive opposite of job engagement). The level of burnout or engagement will then determine how well the worker does the job, and how he or she feels about the larger organization. For example, assessments of employees' level of experienced burnout or engagement have predicted clients' evaluation of service quality (Leiter, Harvie, & Frizzell, 1998) and employees' evaluation of organizational change (Leiter & Harvie, 1998).

Two decades of research on burnout have identified the three key dimensions of this phenomenon (exhaustion, cynicism, and a lack of effectiveness), a plethora of organizational risk factors across many occupations in various countries, and some work-related outcomes (see Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Enzmann, 1998). However, there has not yet been much research that directly tests the proposed mediation model by including measures of all three model components:

organizational factors, experienced burnout, and work-related outcomes. The current study was designed as a first approximation of such a test.

Organizational factors

Our greatest challenge was to devise a measure of organizational factors. In reviewing the proliferation of organizational correlates in many studies of burnout and job stress, we had identified six key domains: workload, control, reward, community, fairness, and values (Maslach & Leiter, 1997; Leiter & Maslach, 1999; Leiter & Maslach, in press). The first two areas are reflected in the Demand-Control model of job stress (Karasek & Theorell, 1990), and reward refers to the power of reinforcements to shape behavior. Community captures all of the work on social support and role conflict, while fairness emerges from the literature on equity and social justice. Finally, the area of values picks up the cognitive-emotional power of job goals and expectations.

A consistent theme throughout this research literature is the problematic relationship between the individual and the situation, which is often described in terms of imbalance or misalignment or misfit – for example, the demands of the job exceed the capacity of the individual to cope effectively. Some of the earliest models of organizational stress focused on this notion of job-person fit, and subsequent theorizing continued to highlight the importance of both individual and contextual factors (see Kahn & Byosiere, 1992). The general concept of person-job fit has had a long history of trying to address variations in people's reaction to

the workplace by considering the congruence between personal and organizational characteristics (for recent examples, see Finnegan, 2000; Lauver & Kristof-Brown, 2001; O'Reilly, Chatman, & Caldwell, 1999; Schneider, 2001). In addition to its theoretical significance, this notion of congruence has an applied relevance, as we have found that employees consider it meaningful to describe their work experience in these terms.

Our goal, then, was to develop a measure that would apply this basic idea of congruence to the assessment of the six key areas of work life. In addition, we wanted this measure to have a generic format that could be utilized easily by a wide range of employees in a variety of organizations. We chose to focus on people's judgment of the congruence itself, and not on the two component parts of person and of job. In this regard, we adopted the Lewinian analysis as described by Schneider (2001) which argues for the greater value of assessing the person and the job together as a total constellation, rather than assessing them separately and computing their "fit" post hoc. Thus, our new measure asks respondents to rate their level of experienced congruence with the job within the six domains of work life. It is not designed to directly test any theory of person-job fit. This new measure, the Areas of Worklife Scale, has the potential to provide useful diagnostic information to organizations interested in interventions to deal with burnout (Leiter & Maslach, 2000).

Six areas of worklife. The basic hypothesis in our mediation model is that the greater the perceived incongruence between the person and the

job in these six areas, the greater the likelihood of burnout; conversely, the greater the perceived congruence, the greater the likelihood of engagement with work. This would suggest a simple additive model, in which incongruence in each of the six areas would contribute separately to greater burnout. However, the research literature suggests the possibility of more complex interrelationships between the six areas, and the current study provides the opportunity to test that possibility.

Studies have consistently found workload to be a strong and distinct predictor of the exhaustion dimension of burnout (Cordes & Dougherty, 1993; Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Enzmann, 1998). Structural models of burnout have shown that exhaustion then mediates the relationship of workload with the other two dimensions of burnout (Lee & Ashforth, 1996; Leiter & Harvie, 1998). This association reflects the relationship of work demands with occupational stress in the stress and coping literature (Cox, Kuk, & Leiter, 1993).

The Demand-Control theory of job stress (Karasek & Theorell, 1990) has made the case for the enabling role of control. This area includes employees' perceived capacity to influence decisions that affect their work, to exercise professional autonomy, and to gain access to the resources necessary to do an effective job. A sense of control indicates that individuals feel they have sufficient authority to perform effectively, yet are not overwhelmed by excessive responsibility at work. Because control is so central to employees' ability to influence the people and processes that

determine the quality of worklife, we propose that it serves as the starting point in our mediation model and will influence the extent to which people can attain congruence in the other areas, especially workload, reward, fairness, and community. In contrast with the interaction of demand and control predicted by the Karasek model, we proposed a series of main effects such that insufficient control and excessive workload will each aggravate burnout and sufficient control and manageable workload will promote engagement with work. Control derives its pivotal position in the model from its implication of agency: control reflects employees' sense of having the freedom and capacity to make consequential choices. Although excessive workload may constrain employees' options, it does not in itself determine employees professional autonomy or administrative authority. In contrast, employees view work that they have chosen differently from work that others or circumstances impose upon them.

The reward area of worklife addresses the extent to which rewards—monetary, social, and intrinsic—are consistent with expectations. Fairness is the extent to which decisions at work are perceived as being fair and people are treated with respect. It reflects employees' experience of institutional justice at work (Tyler, 1990). Community is the overall quality of social interaction at work, including issues of conflict, mutual support, closeness, and the capacity to work as a team. This area encompasses the extensive research on social support and burnout (see Greenglass, Fiksenbaum, & Burke, 1994).

The area of values plays an integrating role in the model, reflecting the overall consistency in the other areas of worklife. As such, it mediates the relationship of the other areas with the psychological experience of burnout or engagement. Congruence in values indicates that the organization's central values are consistent with those of the employee. The individual embraces the organization's mission as a personal mission whose fulfillment is consistent with personal aspirations. When values are incongruent, employees perceive the organization's mission to be incompatible with their own well-being and that of the larger community.

Work-related outcome

To test our mediation model across multiple samples, we needed to identify a more generic work-related outcome that would be relevant and significant for all respondents. The ideal measure—an independently assessed behavioral indicator—was not available from the organization at the time of this study. We decided to measure employees' evaluation of the general change within the organization – whether they saw things getting better or worse within the workplace. A positive perception of change is a central outcome in post-industrial organizations that emphasize quality of service and must continually adapt to volatile conditions.

Organizational change is best viewed as a continuous process shaped by strategic decisions, in contrast with a model of rigidity disrupted on occasion by change agents (Weick and Quinn, 1999). The relevant question from the perspective of continuous change is the extent to which employees

perceive the organization as changing for the better or worse, not whether they perceive any change at all. Especially important to employees' capacity to function in a productive and fulfilling fashion are high performance management practices that pertain to job security, decision making, training, hiring, compensation, communication, and reduced status distinctions (Pfeffer, 1998). Employees' evaluation of the direction of continuous change in these practices is an informative indicator of their overall relationship with their work, and, as such, a central outcome measure. The measure has a temporal dimension as it is based on employees' perceptions of developments over the previous months. This assessment holds implications for employees' views of their organizations' future to the extent the measure reflects an overall trajectory of improvement or deterioration. Evaluation of organizational change is highly appropriate as an outcome measure when specific behavioral indicators are unavailable as it reflects the extent to which employees view their organization as a secure, appropriate, and attractive focus for their creative energies.

Hypotheses

Prior research has concentrated primarily on the impact of the work environment with experienced burnout. There has been less consideration of the role of burnout in mediating the relationship of the work environment with important outcomes, and little that has explored pathways among the

six areas of the work environment. The study to be reported here explores a more complete model, including both direct and mediated pathways.

Our analysis leads to the following hypotheses. The first set proposes the replication of the standard pathways among the three dimensions of burnout: exhaustion predicts cynicism that in turn negatively predicts efficacy. Second, all three dimensions are proposed to predict the outcome of evaluation of change. The third set of hypotheses concerns the relationship of the six areas of worklife to the three dimensions of burnout. As discussed earlier, workload is predicted to have a direct path to exhaustion. Values is predicted to mediate the relationship of all areas (except workload) with the three dimensions of burnout. The integrating role of values is consistent with its definition as a relatively abstract area of worklife. In contrast, the other five areas of worklife have an explicit basis in employees' day-to-day interactions with people, tasks, and events at work. Values is conceived and measured to reflect employees' overall assessment of the extent to which the basic quality of these interactions indicates that the organization furthers what is important and valuable to employees. In this model, employees' specific interactions with the workplace are the basis of their evaluation of the workplace in contrast with a trait-based perspective that employees' attitudes determine their interactions. While this research does not explicitly contrast trait and situational models, it is important to acknowledge the situational nature of

the model that guides these hypotheses. Control is predicted to be related to the other areas of workload, reward, fairness, and community.

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Insert Figure 1 About Here

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The combined set of hypotheses forms the Mediation Model depicted in Figure 1. The viability of this model will be tested in several steps, each of which focuses on a distinct aspect of the model. The objective of these contrasts is not to pit one theory against another, but to consider the extent to which each element of the model contributes to the overall fit. Without such contrasts, a model with a good overall fit may include elements of little consequence. The Mediation Model will be contrasted with two baseline models: first, an Independence Model (no factor loadings and no paths among the latent variables), and second, a Structural Null Model (factor loadings but no paths among the latent variables). Third, the Mediation Model will be contrasted with a Burnout Null Model (including the paths from exhaustion to cynicism and from cynicism to efficacy only). The Burnout Null Model is a meaningful contrast point, as the Mediation Model is meant to improve the prediction beyond the paths among the three dimensions of burnout.

The fourth contrast will be with a Burnout Predictor Model, which includes (1) the paths from burnout to the outcome of change, and (2) the paths from both workload and values to burnout. This model comprises the

basic components of the mediation model, but does not include any of the relationships among the six areas of worklife. Note that the path from workload to exhaustion is negative because workload, consistent with the other five areas of worklife, is measured in terms of congruence, such that a higher score indicates a more manageable workload.

The analysis will then add the paths among these six areas in two steps. Thus, the fifth contrast will be the Values Model, which adds the paths of reward, community, and fairness with values, consistent with the role of values as summarizing a person's view of a worksetting. The full Mediation Model will add the paths of control to the other areas, consistent with the proposed role of control noted in the introduction. Finally, the analysis will test the mediation hypothesis by assessing whether there is additional explanatory power in an Alternative Model, which adds a direct path from values to evaluation of change. This last test contrasts the mediation role of burnout with a model in which worklife directly affects outcomes without shaping a person's levels of exhaustion, cynicism, or efficacy.

Method

A survey was administered to the entire workforce of two organizations. The assessment was carried out as an organizational checkup on institutional well-being, utilizing a checkup survey process developed by the authors in their prior research (Leiter & Maslach, 2000). In both samples, there was an interest in assessing the current

organizational climate (although the reasons for doing so were quite different). In each organization, the process of administering the survey to all employees was overseen by a checkup survey team that was selected to be: (1) representative of the constituencies within the organization, (2) explicitly supported by senior management, and (3) highly collaborative through all levels and departments of the larger organization. This process is designed to produce a high level of employee participation within the organization, with a minimum goal of a 70% response rate (see Leiter & Maslach, 2000 for details of this organizational checkup process). The authors guided each organization through the process and provided participants with a comprehensive report. In both samples, the assessment process included measures of the three key components of the model: the six domains of worklife, experienced job burnout, and evaluation of organizational change.

Participants

A test of the new measure and of the full model required a large sample of employees who worked within a common organizational setting. Two such organizational samples were obtained, in order to test the viability of the model in two distinct work environments, as well as across a range of occupations.

University sample

A university was facing a number of critical issues involving staff morale and performance. Within the student services division of that

university, the Human Resources office took a fresh new look at human resources management and organizational development. As a result, several initiatives surfaced. One was to assess the quality of work life through the eyes of the staff. A proposal was made to senior management which requested that staff be surveyed. The results of the survey would enable this organization to further enhance the quality of work life by implementing new initiatives and programs.

The organization distributed surveys to all 905 staff members in the various settings that provided student services; this division of the university did not include academic staff. The researchers received 740 completed surveys for a response rate of 81.8%. The sample for this analysis consisted of only the 602 full-time employees. Of the respondents, 65.3 percent were female, and 34.7 percent were male. Participants had worked at the organization for varying lengths of time: 3.8 percent had worked at the organization for more than 25 years, 13.1 percent for 16 to 25 years, 35 percent for 6 to 15 years, 34.7 percent for 1 to 5 years, and 13.4 percent for less than one year. Their occupations included student service professionals (139), administrative and clerical (134), facilities maintenance (98), operations (86), food services (83), senior management (34), computing and technical (34), and communications (16).

Hospital sample

Three health care institutions in a large city were undergoing a merger that had been mandated by the provincial government. One of the sites was

a major research hospital that covered a wide range of tertiary health specialties. The other two sites had distinct focus areas defined by patient population in one site and type of disorder in the other site. The senior management of the newly merged institution initiated a survey of all staff members to provide an information flow that would facilitate the success of the merger. The differences in history and focus of the three sites as well as staff members' initial reactions to the merger suggested that the institution faced a major challenge in integrating the values and operations of the three sites. The sites differed in the relative importance that they placed on clinical research, education, and patient care. The primary operational challenge faced by the two smaller institutions upon integration was to function as a large-scale institution rather than as a moderately small stand-alone facility. The dynamics of this challenge were evident in comments by managers and front-line staff members, which disparaged the other settings and expressed skepticism about the potential to integrate services. On the basis of anecdotal observations of a divisive organizational culture, management contracted for a detailed assessment of the employees' response to their work situation.

The organization distributed surveys to all 3500 staff members in the various settings. The researchers received 2633 completed surveys for a response rate of 75.2%. The sample for this analysis was the 2009 full-time employees within these responses. Of the respondents, 82.1 percent were female, and 17.9 percent were male. Participants had worked at the

organization for varying lengths of time: 12.6 percent had worked at the organization for more than 21 years, 33.1 percent for 11 to 20 years, 24.8 percent for 6 to 10 years, 19.8 percent for 1 to 5 years, and 9.7 percent for less than one year. Occupational groups included nurses (30.7%), other health professionals (23.1%), service workers (9.0%), researchers (3.1%), clerical workers (14.1%), corporate support (4.7%), management (7.2%), and other (8.2%). Physicians declined to participate in the survey as they were not employees of the hospital, but utilized the facilities as independent professionals.

Measures

Three measures assessed the primary elements of the study: the six areas of worklife, the three dimensions of burnout, and people's evaluation of change. In each of the two settings these measures were sections of larger questionnaires that addressed other issues of concern to the respective organizations.

Burnout. The Maslach Burnout Inventory—General Scale (MBI—GS; Schaufeli, Leiter, Maslach, & Jackson, 1996) measures the three dimensions of the burnout-engagement continuum: exhaustion-energy, cynicism-involvement, and inefficacy-efficacy. The items are framed as statements of job-related feelings (e.g. "I feel burned out from my work", "I feel confident that I am effective at getting things done"), and are rated on a 6-point frequency scale (ranging from "never" to "daily"). Burnout is reflected in higher scores on exhaustion and cynicism, and lower scores on efficacy,

while the opposite pattern reflects greater engagement. Developed from the original MBI (Maslach & Jackson, 1981), which was designed for human service occupations, the MBI–GS is a 16-item measure that evaluates burnout among people in all occupations. Thus, the MBI-GS was appropriate for all employees within the participating organizations, providing comparative data among units and occupational groups.

Six areas of worklife. The Areas of Worklife Scale (AWS) measure (Leiter & Maslach, 2000) comprises 29 items that produce distinct scores for each of the six areas of worklife: workload (6), control (3), reward (4), community (5), fairness (6), and values (5). The items were worded as statements of perceived congruence or incongruence between oneself and the job. Thus each subscale includes positively worded items of congruence, e.g., “I have enough time to do what’s important in my job” (workload) and negatively worded items of incongruence, e.g., “Working here forces me to compromise my values” (values). Respondents indicate their degree of agreement with these statements on a 5-point Likert-type scale ranging from 1 (strongly disagree), through 3 (hard to decide), to 5 (strongly agree). The scoring for the negatively worded items is reversed. For each of the six subscales, the AWS measure defines congruence as a high score (greater then 3.00), indicating a higher degree of perceived alignment between the workplace and the respondent’s preferences. Conversely, it defines incongruence as a low score (less than 3.00), indicating more perceived misalignment or misfit between the worker and

the workplace. The AWS items were developed from a series of staff surveys conducted by the Centre for Organizational Research & Development (Leiter & Harvie, 1998; Maslach & Leiter, 1997) as a means of assessing the constructs underlying our analysis of the six areas of worklife. The scale has yielded a consistent factor structure across samples and has showed consistently high correlations with the MBI-GS (Leiter & Maslach, 1999).

Evidence for the validity of the items was provided by examining the correspondence of scores on the Areas of Worklife measure with written comments provided by participants in the hospital study. The overwhelming proportion of the comments submitted by 1443 participants contained complaints. A qualitative analysis assigned comments from individuals to nodes, many of which were relevant to the six areas of worklife. Table 1 displays correlations of scores on the six areas of worklife with a binary indicator of whether an individual wrote a complaint within the various categories listed in the first column of Table 1. The second column of Table 1 indicates the area of worklife most directly relevant to each node. The pattern of correlations in Table 1 indicates that complaints were most strongly correlated with scores on the area of worklife which was most directly relevant.

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Insert Table 1 About Here

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Further evidence of the AWS validity is evident in the correspondence of participants' ratings of control with their supervisory role within the organizations. In the university sample, those with supervisory responsibility rated control more highly (M = 3.69, SD = 0.80, N = 183) than those with no supervisory responsibilities (M = 3.48, SD = 0.90, N = 104) or those who supervised only student employees (M = 3.46, SD = 0.96, N = 284) ($F_{(2, 568)}$ = 3.81, $p < .05$). In the hospital, senior managers scored highest on control (M = 3.78, SD = 0.70, N = 16), followed by directors (M = 3.40, SD = 0.87, N = 37), and supervisors (M = 3.24, SD = 0.79, N = 309), and front line staff (M = 2.91, SD = 0.81, N = 1514) ($F_{(3, 1872)}$ = 22.44, $p < .001$). These patterns support the discriminant and convergent validity of the AWS.

Evaluation of change. Evaluation of change was assessed by 11 items in the hospital sample and 12 items in the university sample, of which the first three items were used in the model testing. This measure has served as an outcome measure in previous research (Leiter & Harvie, 1998). Participants rated items on a five-point Likert-type scale from 1 (much worse) through 3 (no change) to 5 (much better), in response to an introductory sentence: "How do you perceive changes over the past six months in the following:" As explained below, the causal model analysis limited each latent variable to three indicators. The three items used in the model testing referred to "services you provide," "your involvement in decisions that affect your work," and "your job security." All three issues—services, decision making,

and job security—have been issues of concern in burnout research (Schaufeli & Enzmann, 1998) and were identified as critical challenges in the participating organizations. Pfeffer (1998) identified job security and decentralized decision making as basic conditions for employees' positive evaluation of organizational change. Although the scale assesses a wide range of issues, the measure focuses on respondents' general assessment of progress within the organization, as evident in the relatively high level of inter-item consistency across the scale items (alpha = .95). This pattern is consistent with that of a causal construct (Bollen & Lennox, 1991) in which responses on diverse items are determined by an underlying construct. The timeframe of six months was consistent with that of the MBI-GS, as well as with a reasonable span for employees to consider when evaluating their work settings. Further, it provided a consistent metric across the two samples. The overall variable of evaluation of change is computed as the average rating across all of the change items.

Results

Descriptive Statistics

Tables 2 and 3 display the descriptive statistics and means for the variables for the university sample and the hospital sample respectively. In regard to the mean scores for the areas of worklife, a rating of 3.00 is neutral, with means above 3.00 indicating a positive perception of the experienced congruence with that area of work life, and means below 3.00 indicating a negative perception of a greater incongruence. In the

university sample, the most positive rating within the six areas is control (3.53) followed by community (3.32), values (3.28), and reward (3.21). The most negative rating was within fairness (2.63). Evaluation of change received a slightly positive rating of 3.06. In the hospital sample, the most positive rating within the six areas is values (3.60) followed by community (3.31). The most negative rating was within workload (2.56) followed by fairness (2.68). Evaluation of change received a slightly negative rating of 2.85. For both samples, scores on the three dimensions of job burnout were in the normative range reported for various occupational groups (Maslach, Jackson, & Leiter, 1996). The correlations were in the expected direction, and all were statistically significant except for the correlation of workload with efficacy in the university sample.

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Insert Table 2 and Table 3 About Here

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Model Testing

The hypothesized model was tested against data from each of the two samples using EQS (Bentler, 1995). This analysis was structured to consider (1) the overall fit of the model, and (2) whether all of the paths in Figure 1 are statistically significant. It also provided a confirmatory factor analysis for all of the measures in the model. The analysis also considered

the extent to which the burnout – engagement continuum mediates the relationship of the six areas of worklife with the outcome of evaluation of change. In this analysis only three indicators were used as indicators of each of the latent variables: the three dimensions of burnout, the six areas of worklife, and perception of change. Limiting the number of indicators to three focuses the analysis primarily on the structural equation model, which is the primary focus of this study. This approach differs from one in which scale reliability is considered solely in reference to overall inter-item consistency among the items. In contrast, structural equation analysis considers, in addition to high inter-correlations among the items within a latent construct, the consistency in the correlations of each indicator within that latent construct with the indicators within the model's other latent constructs (Bentler & Chou, 1987; Hayduk, 1987; Jaccard & Wan, 1996). Whereas each indicator added to the causal model makes a distinct demand on the predictive power of the model, a limit of three indicators for each construct yields the most parsimonious perspective on the structural model. A limit of three indicators also brings a rigor to measurement construction in that it requires that every item maintain a strong level of inter-item correlation with the other two items, and that all three items maintain a consistent pattern relative to the other constructs in the model. It is necessary to have at least three indicators for the analysis to calculate the underlying consistency among the items. Similarly, three items are necessary to compute Cronbach's alpha. One pair of items produces only

one correlation, while three items produce three correlations, the commonality of which determines the inter-item consistency among the items. Single item indicators rarely meet the distribution specifications of a causal modeling analysis and provide no basis for determining commonality among indictors. Selecting the first three indicators of each scale—rather than searching for the most auspicious items—emphasizes their strong inter-item consistency. The factor loadings of these indicators for the two samples are displayed in Figure 2 and 3; these are the coefficients in the context of the causal model analysis described below.

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Insert Figure 2 and Figure 3 About Here

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The goodness of fit analyses presented in Table 4 and Table 5 present the model contrasts for each of the two samples. For both samples the Structural Null, comprising only the factor loadings and no structural relationships constituted a major improvement over the Independence Model. In turn, the Burnout Null Model provided another improvement in both samples, but with goodness of fit indices short of the criterion level of .90 (See Table 4 and Table 5). For the university sample, the Mediation model improves the goodness of fit (χ^2 difference $_{(13\ df)}$= 2184.24 – 953.40 = 1230.74 ($\underline{p} < .0001$)) over the Burnout Null Model. The additional model contrasts differentiated this improvement in fit. First, the Burnout Predictor Model improved the fit over the Burnout Null Model (χ^2 difference $_{(7\ df)}$=

2184.14 – 1921.23= 262.91 ($p < .0001$)). This difference indicates that the Mediation model fits the data considerably better than a model that includes only the relationships among the three dimensions of burnout. Second, the Value Model improved the fit over the Burnout Predictor Model (χ^2 difference $_{(2\ df)}$= 1921.23 – 1584.44= 336.79 ($p < .0001$)). Third, the Mediation Model improved the fit over the Value Model (χ^2 difference $_{(5\ df)}$= 1584.44 – 953.40 = 631.04 ($p < .0001$)).

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Insert Table 4 and Table 5 About Here

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For the hospital sample, the Mediation Model also improves the goodness of fit (χ^2 difference $_{(15\ df)}$= 4802.31 – 2043.21= 2759.10 ($p < .0001$)) over the Burnout Null Model. The additional model contrasts differentiated this improvement in fit. First, the Burnout Predictor Model improved the fit over the Burnout Null Model (χ^2 difference $_{(7\ df)}$= 4802.31 – 3528.29= 1274.02 ($p < .0001$)). Second, the Value Model improved the fit over the Burnout Predictor Model (χ^2 difference $_{(2\ df)}$= 3528.29 – 3325.62= 202.67 ($p < .0001$)). Third, the Mediation Model improved the fit over the Value Model (χ^2 difference $_{(5\ df)}$= 3325.62 – 2043.21= 1282.41 ($p < .0001$)).

Unlike the Chi Square, the Bentler-Bonett Normed Fit Index and the Comparative Fit Index are independent of sample size, providing a basis for assessing the relative fit of the model to the two samples. An examination of the fit indices in the two samples suggests that the model is equally

applicable to both.

The mediating role of job burnout was tested by an Alternative Model that had a direct path from values to evaluation of change. In the university sample this addition resulted in a significant increase in the model fit (χ^2 difference $_{(1\ df)}$= 1020.85 – 1008.65 = 12.20 ($p < .01$)), but not in the hospital sample (χ^2 difference $_{(1\ df)}$= 2958.46 – 2964.75 = -6.29 (n. s.)). This finding acknowledges that the mediating role of burnout is not complete in every sample, but confirms that mediation is the consistent theme across settings.

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Insert Figure 4 and Figure 5 About Here

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Figure 4 and Figure 5 display the coefficients for the various paths in the model for the university sample and the hospital sample respectively. The analyses confirmed that all of the proposed paths in both samples were statistically significant ($p <.05$). All components of the hypothesized model were confirmed.

Direct and Indirect Effects

The direct and indirect effects for the university sample are displayed in Table 6; those of the hospital sample are displayed in Table 7. The two analyses are largely consistent with one another. Both analyses confirm the pivotal role of control in the model: in addition to its strong direct paths to workload, reward, community, and fairness, control makes a major indirect

contribution to predicting all of the other variables in the study. This pattern is especially striking with the prediction of values, in which the indirect contribution of control is greater than the direct contribution of any of the three areas of worklife with a direct path to values. In the hospital sample control's indirect contribution to predicting exhaustion is larger than the direct path from values to exhaustion, mediated through the direct path from workload to exhaustion. In the university sample, the direct path from values to exhaustion was larger than the indirect path from control. In both samples workload made a large indirect contribution on assessment of change and on cynicism through its direct path to exhaustion.

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Insert Table 6 and Table 7 About Here

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Discussion

The findings from this study provide support for the proposed mediation model. The experience of burnout or engagement is the link between the organizational context and work-related outcomes. It is not simply that burnout is an important psychological outcome in its own right, but that it is related to people's commitment to their job and their evaluation of organizational change. The clear implication is that the burnout experience should be predictive of other job-related outcomes, such as work behaviors, and this should be the focus of future research.

A striking aspect of the findings is the complex way in which the six areas of worklife predicted burnout. Workload and control each played critical roles (thus replicating conceptually the Demand-Control model) but were not sufficient. Reward, community, and fairness added further power to predict values, which in turn was the critical predictor of the three dimensions of burnout. The results revealed that this was not a simple additive model, but a more complicated mediation model in its own right. The strong pathways from control to reward, community, and fairness acknowledge the role of autonomy and participative decision making to empower people to shape other key areas of worklife. The subsequent pathways from these three areas to values are consistent with people integrating their work experiences on various fronts into a coherent perspective on their working life. Through these complex relationships, the mediation model takes a step towards reflecting the processes through which people make sense of their work experience, and the resulting conceptual framework constitutes a major advance over simple listings of organizational characteristics.

It is especially noteworthy that this complex pattern was replicated so strongly in two very different organizations, each with very heterogeneous workforces. There was a remarkable consistency in factor structures and EQS models across these two large and diverse samples. These results provide impressive support for the power of the six areas construct and the new measure of them. These findings suggest a research agenda for

burnout based on a structured perspective of workplaces. The set of organizational correlates of burnout has grown so diverse that its further adumbration does not appear constructive in itself. The mediation model identifies six distinct dimensions of work settings that encompass a large scope of burnout's organizational correlates while remaining sufficiently focused to be manageable. The structure of their relationships in the mediation model—including the pivotal role of control, the relative independence of workload, and the pervasive influence of values —define a psychological environment in which people perceive and experience the world of work. Underlying the model and the measures is the concept of a person's experienced congruence or incongruence with the job environment. Rather than proposing an ideal job or the ideal employee, the model accepts a wide range of functional job environments and a wide range of personal aspirations and inclinations that shape the way people work. The focus of the research is examining the interactions of these two dynamic and complex entities.

The interpretation of these results must be tempered, of course, by the fact that they are based on self-report data in a cross-sectional research design. We have proposed a causal sequence, but the EQS analyses cannot provide a definitive test of those causal relationships. Subsequent phases of our research program will include longitudinal studies in which other, non-self-report, sources of data will provide a broader context for the subjective

assessments reflected in the checkup survey responses (see Leiter & Maslach, in press, for an initial set of longitudinal analyses).

Nevertheless, the self-report format of the checkup survey has proved to be a powerful tool for mobilizing organizational self-reflection and change. The process of the organizational checkup is designed to inspire the full participation of all the employees, as indicated by the strikingly high response rates in both samples. The main intent of the survey is to generate a comprehensive profile of the organization's workforce, which can be used to inform decisions about intervention. However, the participative nature of the checkup process can be viewed as an intervention in itself, which engages all employees in an organizational dialogue and prepares them to get involved in future change. Longitudinal studies assessing the impact of interventions will be the basis of assessing the extent to which this potential can be fulfilled.

We have implemented this checkup process in several organizations, in addition to the two utilized in the current study. All of them have used the checkup information to plan change initiatives with the intention of follow-up surveys at approximately two-year intervals. As this information base evolves it will provide a perspective on not only the theoretical implications of our mediation model, but the model's practical implications as well.

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Table 1

Correspondence With Qualitative Analysis

Category	**Area of Worklife**	**Workload**	**Control**	**Rewards**	**Communit**	**Fairness**	**Values**
Workload On Wards	Workload	**-.14**	.02	-.05	.00	-.02	.02
Workload (Administrative)	Workload	**-.13**	-.06	-.02	-.05	-.03	-.01
Patient Care Concerns	Workload	**-.09**	-.05	-.06	-.07	-.04	-.04
Number Of Staff	Workload	**-.06**	-.04	-.04	-.03	-.06	.01
Clerical Support	Workload	**-.08**	.07	.01	.02	-.02	.04
Distribution Of Workload	Workload	**-.06**	-.04	-.06	-.06	-.04	-.04
Timing Of Amalgamation	Workload	**-.10**	.00	.00	.01	-.03	-.02
Excessive/Unproductive Meetings	Control	-.04	**.08**	.06	.00	.05	.05
Professional Autonomy/Control	Control	-.06	**-.08**	-.05	-.03	-.07	.00

Flexible Work Times And Place	Control	.02	**-.06**	-.01	-.01	-.03	.00
Positive Feedback And Appreciation	Reward	-.03	-.02	**-.07**	.01	-.03	-.01
Appreciation	Reward	-.05	-.08	**-.11**	-.03	-.02	-.07
Accountability For Work	Community	-.07	-.02	-.04	**-.10**	-.05	-.01
Fairness	Fairness	.00	-.05	-.12	-.07	**-.14**	-.07
Educational Opportunities	Fairness	-.04	-.03	-.06	.01	**-.08**	-.06
Trust	Fairness	.01	-.06	-.06	-.04	**-.11**	.03
Working Relationships	Fairness	-.07	-.06	-.07	-.05	**-.10**	-.03
Respect	Fairness	-.05	-.04	-.11	**-.07**	**-.07**	-.03
Fair Distribution Of Rewards	Fairness	-.03	-.07	**-.08**	-.06	**-.08**	-.02
Staff Involvement/Input	Values	-.03	-.01	-.03	-.04	-.09	**-.09**
Social Get-Togethers /Functions	Values	-.02	.01	.05	.03	-.02	**.08**

Table 2

Descriptive Statistics and Correlations

University Sample

Variable	Mean	Std. Deviation	alpha	Cynicism	Efficacy	Workload	Control	Reward	Community	Fairness	Values	Change
Exhaustion	2.72	1.50	.90	.57	-.19	.57	-.40	-.45	-.34	-.38	-.33	-.47
Cynicism	1.96	1.46	.82		-.38	.19	-.42	-.49	-.44	-.42	-.43	-.47
Efficacy	4.61	0.90	.72			-.04	.22	.23	.22	.14	.25	.26
Workload	3.11	0.88	.73				-.18	-.21	-.10	-.15	-.08	-.22
Control	3.53	0.90	.64					.53	.44	.51	.38	.55
Reward	3.21	1.06	.87						.55	.59	.44	.57
Community	3.32	0.90	.85							.50	.44	.49
Fairness	2.63	0.94	.87								.57	.61
Values	3.28	0.70	.77									.45

		7	6
		0.6	.8
Change	3.06	8	9

Note: N=602; All correlations except for Workload with Efficacy significant, p<.01

Table 3

Descriptive Statistics and Correlations

Hospital Sample

Variable	Mean	Std. Deviation	alpha	Cynicism	Efficacy	Workload	Control	Reward	Community	Fairness	Values	Change
Exhaustion	3.02	1.55	.92	.51	-.07	-.62	-.37	-.37	-.30	-.37	-.23	-.36
Cynicism	1.84	1.36	.82		-.31	-.19	-.35	-.40	-.33	-.37	-.38	-.40
Efficacy	4.46	1.00	.75			.00	.18	.20	.17	.11	.24	.19
Workload	2.56	0.81	.80				.29	.24	.17	.29	.11	.31
Control	2.96	0.82	.75					.46	.38	.48	.28	.38
Reward	3.02	0.95	.85						.38	.47	.28	.39
Community	3.31	0.83	.85							.40	.28	.37
Fairness	2.68	0.80	.83								.36	.51
Values	3.68	0.60	.70									.35

	0	5	
	2.8	0.6	.89
Change	5	0	

Note: N=2009; All correlations except for Workload with Efficacy significant, p<.01

Table 4

Model Contrasts

University Sample

Model	Degrees of Freedom	Chi Square	Bentler-Bonett Non-Normed Fit Index	Comparative Fit Index	LISREL Adjusted Goodness of Fit	Root Mean Square Residual
Independence	435	6900.28				
Structural Null	405	2349.79	.688	.709	.676	.405
Burnout Null	403	2184.14	.703	.725	.700	.349
Burnout	396	1921.23	.741	.754	.748	.327
Predictor						
Value	393	1584.44	.756	.780	.766	.283
Mediation	389	953.40	.902	.913	.885	.161

Table 5

Model Contrasts

Hospital Sample

Model	Degrees of Freedom	Chi Square	Bentler-Bonett Non-Normed Fit Index	Comparative Fit Index	LISREL Adjusted Goodness of Fit	Root Mean Square Residual
Independence	435	20817.38				
Structural Null	405	5334.14	.740	.758	.739	.324
Burnout Null	403	4802.31	.767	.784	.772	.277
Burnout	396	3528.29	.831	.846	.830	.236
Predictor						
Value	393	3325.62	.841	.856	.841	.145
Mediation	389	2043.21	.909	.919	.911	.121

Figure 1

Hypothesized Model

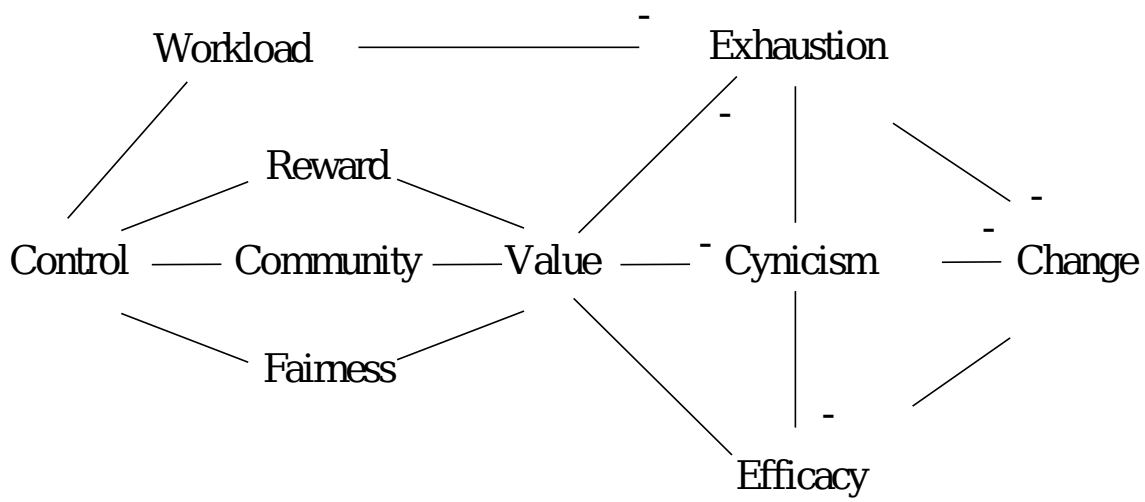

Figure 2

Factor Loadings: University Sample

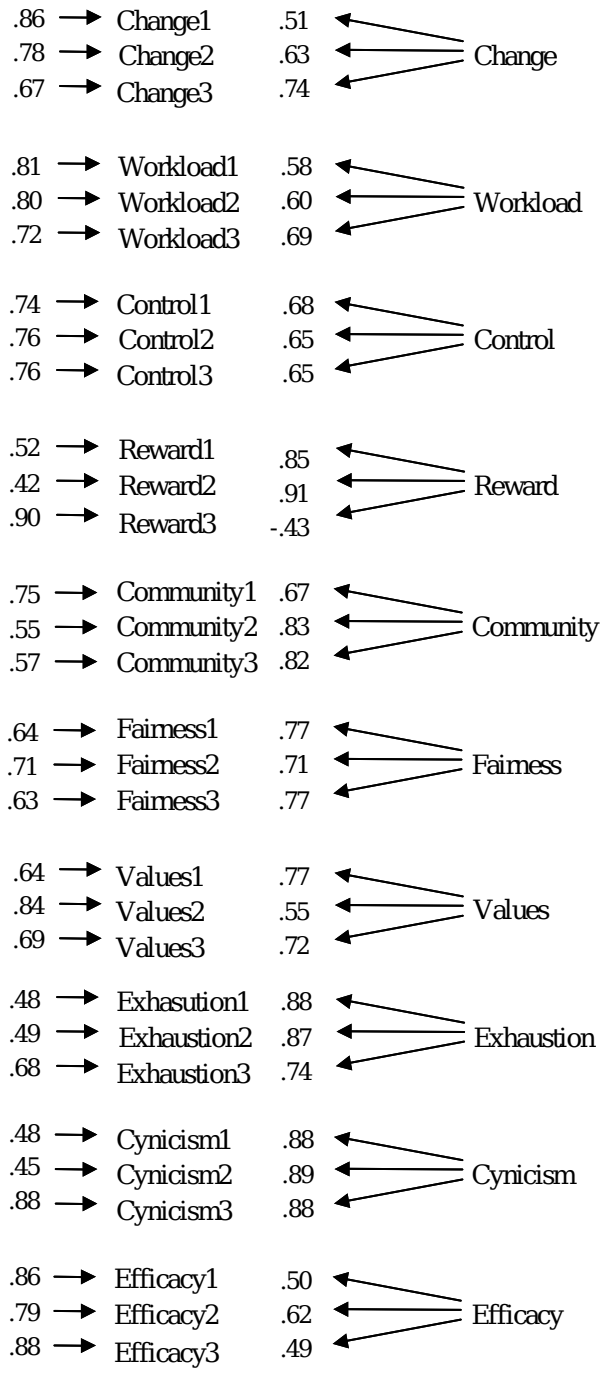

Figure 3

Factor Loadings: Hospital sample

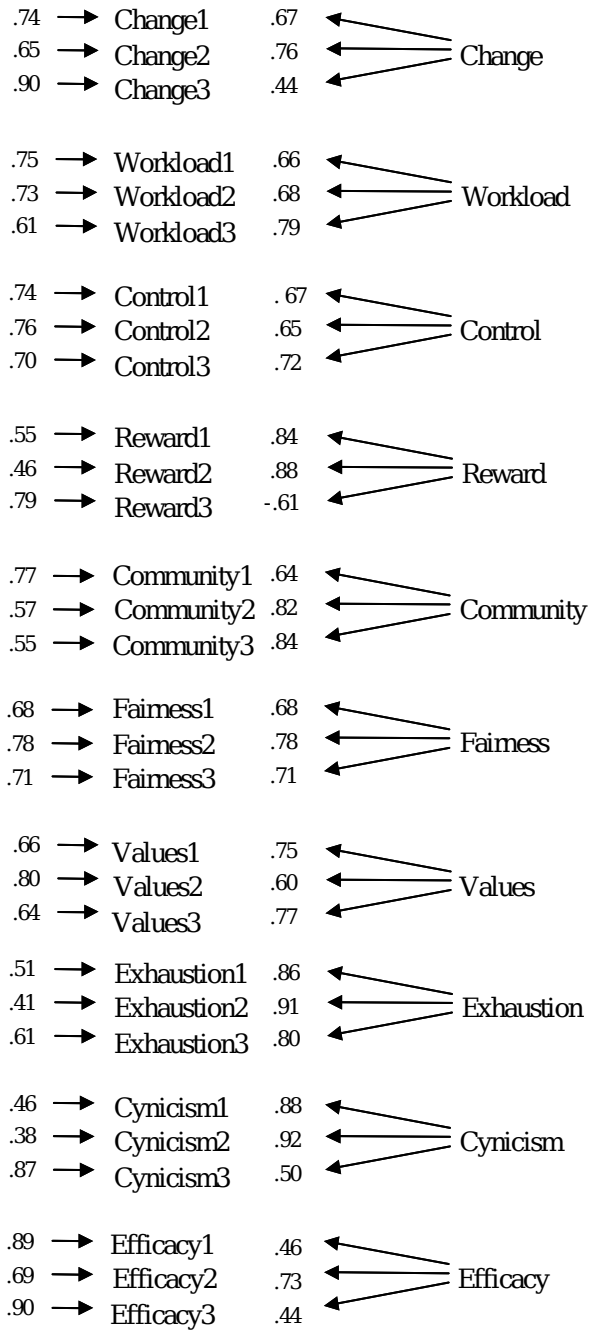

Figure 4

Causal Model Coefficients: University Sample

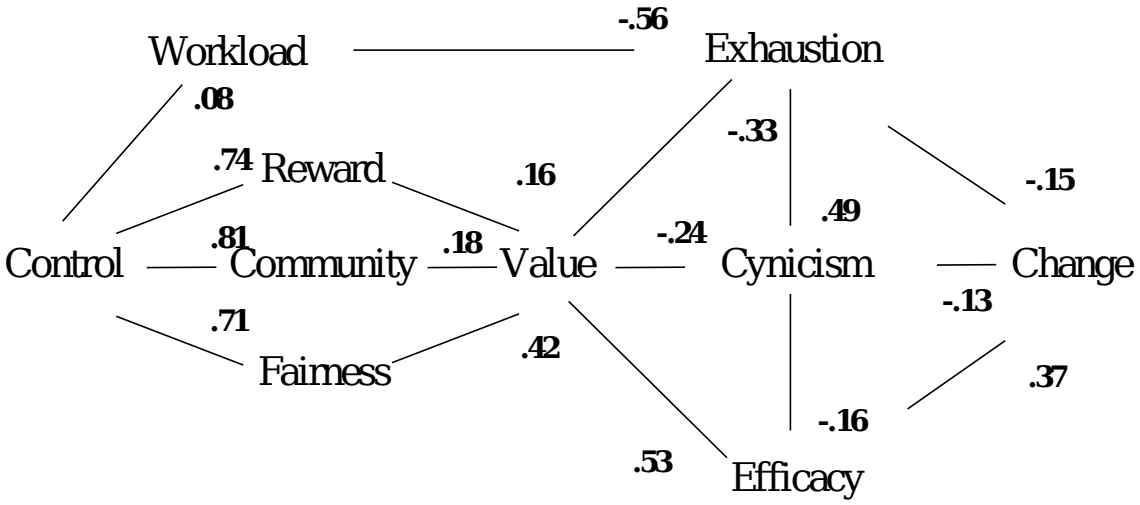

Figure 5

Causal Model Coefficients: Hospital sample